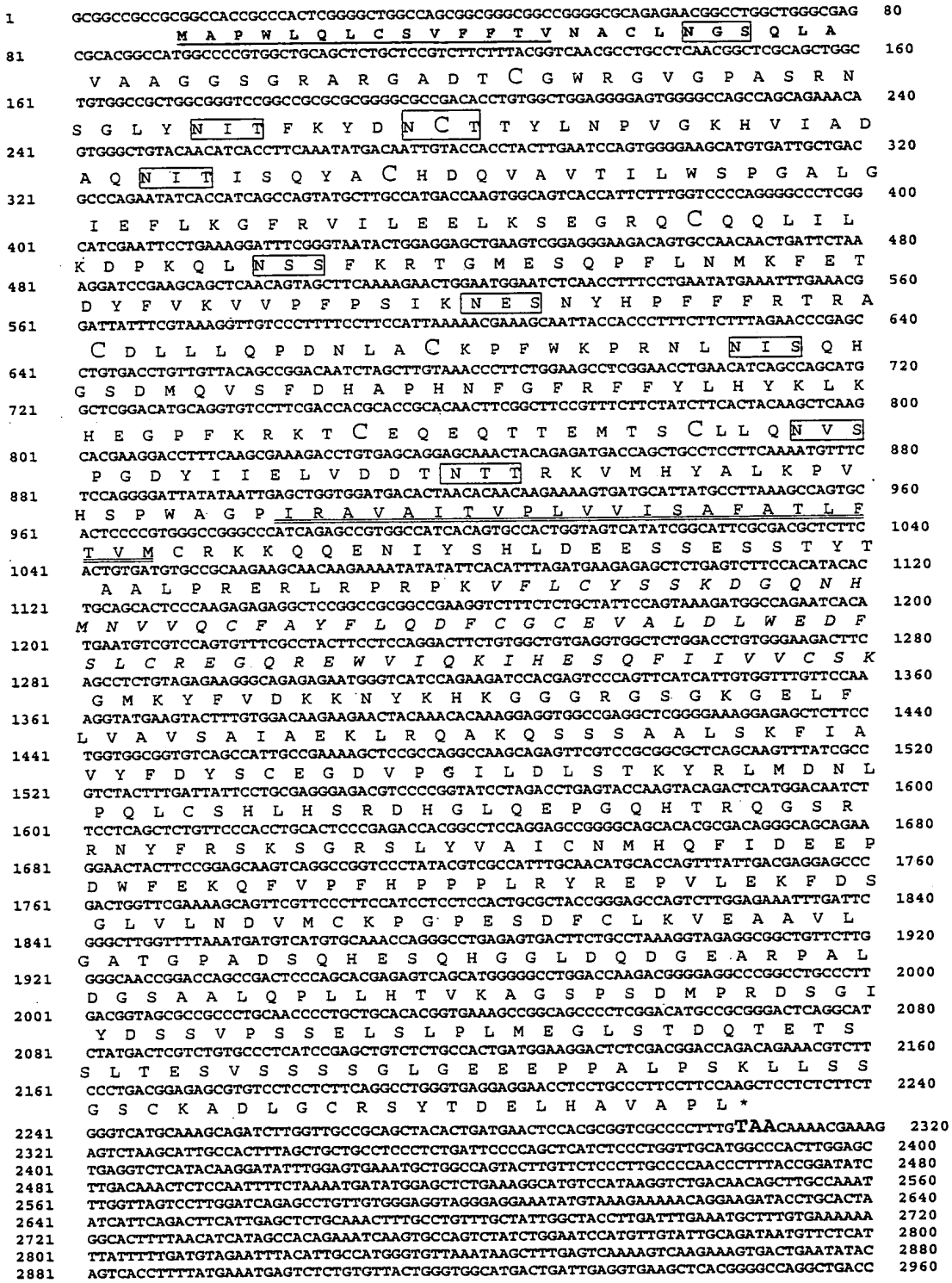
FIG. 1A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M A P W L Q L C S V F F T V N A C L N G S Q L A
81 CGCACGGCCATGGCCCCGTGGCTGCAGCTCTGCTCCGTCTTCTTTACGGTCAACGCCTGCCTCAACGGCTCGCAGCTGGC 160
V A A G G S G R A R G A D T C G W R G V G P A S R N
161 TGTGGCCGCTGGCGGGTCCGGCCGCGCGCGGGGCGCCGACACCTGTGGCTGGAGGGGAGTGGGGCCAGCCAGCAGAAACA 240
S G L Y N I T F K Y D N C T T Y L N P V G K H V I A D
241 GTGGGCTGTACAACATCACCTTCAAATATGACAATTGTACCACCTACTTGAATCCAGTGGGGAAGCATGTGATTGCTGAC 320
A Q N I T I S Q Y A C H D Q V A V T I L W S P G A L G
321 GCCCAGAATATCACCATCAGCCAGTATGCTTGCCATGACCAAGTGGCAGTCACCATTCTTTGGTCCCCAGGGGCCCTCGG 400
I E F L K G F R V I L E E L K S E G R Q C Q Q L I L
401 CATCGAATTCCTGAAAGGATTTCGGGTAATACTGGAGGAGCTGAAGTCGGAGGGAAGACAGTGCCAACAACTGATTCTAA 480
K D P K Q L N S S F K R T G M E S Q P F L N M K F E T
481 AGGATCCGAAGCAGCTCAACAGTAGCTTCAAAAGAACTGGAATGGAATCTCAACCTTTCCTGAATATGAAATTTGAAACG 560
D Y F V K V V P F P S I K N E S N Y H P F F F R T R A
561 GATTATTTCGTAAAGGTTGTCCCTTTTCCTTCCATTAAAAACGAAAGCAATTACCACCCTTTCTTCTTTAGAACCCGAGC 640
C D L L L Q P D N L A C K P F W K P R N L N I S Q H
641 CTGTGACCTGTTGTTACAGCCGGACAATCTAGCTTGTAAACCCTTCTGGAAGCCTCGGAACCTGAACATCAGCCAGCATG 720
G S D M Q V S F D H A P H N F G F R F F Y L H Y K L K
721 GCTCGGACATGCAGGTGTCCTTCGACCACGCACCGCACAACTTCGGCTTCCGTTTCTTCTATCTTCACTACAAGCTCAAG 800
H E G P F K R K T C E Q E Q T T E M T S C L L Q N V S
801 CACGAAGGACCTTTCAAGCGAAAGACCTGTGAGCAGGAGCAAACTACAGAGATGACCAGCTGCCTCCTTCAAAATGTTTC 880
P G D Y I I E L V D D T N T T R K V M H Y A L K P V
881 TCCAGGGGATTATATAATTGAGCTGGTGGATGACACTAACACAACAAGAAAAGTGATGCATTATGCCTTAAAGCCAGTGC 960
H S P W A G P I R A V A I T V P L V V I S A F A T L F
961 ACTCCCCGTGGGCCGGGCCCATCAGAGCCGTGGCCATCACAGTGCCACTGGTAGTCATATCGGCATTCGCGACGCTCTTC 1040
T V M C R K K Q Q E N I Y S H L D E E S S E S S T Y T
1041 ACTGTGATGTGCCGCAAGAAGCAACAAGAAAATATATATTCACATTTAGATGAAGAGAGCTCTGAGTCTTCCACATACAC 1120
A A L P R E R L R P R P K V F L C Y S S K D G Q N H
1121 TGCAGCACTCCCAAGAGAGAGGCTCCGGCCGCGGCCGAAGGTCTTTCTCTGCTATTCCAGTAAAGATGGCCAGAATCACA 1200
M N V V Q C F A Y F L Q D F C G C E V A L D L W E D F
1201 TGAATGTCGTCCAGTGTTTCGCCTACTTCCTCCAGGACTTCTGTGGCTGTGAGGTGGCTCTGGACCTGTGGGAAGACTTC 1280
S L C R E G Q R E W V I Q K I H E S Q F I I V V C S K
1281 AGCCTCTGTAGAGAAGGGCAGAGAGAATGGGTCATCCAGAAGATCCACGAGTCCCAGTTCATCATTGTGGTTTGTTCCAA 1360
G M K Y F V D K K N Y K H K G G G R G S G K G E L F
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L V A V S A I A E K L R Q A K Q S S S A A L S K F I A
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V Y F D Y S C E G D V P G I L D L S T K Y R L M D N L
1521 GTCTACTTTGATTATTCCTGCGAGGGAGACGTCCCCGGTATCCTAGACCTGAGTACCAAGTACAGACTCATGGACAATCT 1600
P Q L C S H L H S R D H G L Q E P G Q H T R Q G S R
1601 TCCTCAGCTCTGTTCCCACCTGCACTCCCGAGACCACGGCCTCCAGGAGCCGGGGCAGCACACGCGACAGGGCAGCAGAA 1680
R N Y F R S K S G R S L Y V A I C N M H Q F I D E E P
1681 GGAACTACTTCCGGAGCAAGTCAGGCCGGTCCCTATACGTCGCCATTTGCAACATGCACCAGTTTATTGACGAGGAGCCC 1760
D W F E K Q F V P F H P P P L R Y R E P V L E K F D S
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G L V L N D V M C K P G P E S D F C L K V E A A V L
1841 GGGCTTGGTTTTAAATGATGTCATGTGCAAACCAGGGCCTGAGAGTGACTTCTGCCTAAAGGTAGAGGCGGCTGTTCTTG 1920
G A T G P A D S Q H E S Q H G G L D Q D G E A R P A L
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D G S A A L Q P L L H T V K A G S P S D M P R D S G I
2001 GACGGTAGCGCCGCCCTGCAACCCCTGCTGCACACGGTGAAAGCCGGCAGCCCCTCGGACATGCCGCGGGACTCAGGCAT 2080
Y D S S V P S S E L S L P L M E G L S T D Q T E T S
2081 CTATGACTCGTCTGTGCCCTCATCCGAGCTGTCTCTGCCACTGATGGAAGGACTCTCGACGGACCAGACAGAAACGTCTT 2160
S L T E S V S S S S G L G E E E P P A L P S K L L S S
2161 CCCTGACGGAGAGCGTGTCCTCCTCTTCAGGCCTGGGTGAGGAGGAACCTCCTGCCCTTCCTTCCAAGCTCCTCTCTTCT 2240
G S C K A D L G C R S Y T D E L H A V A P L *
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2321 AGTCTAAGCATTGCCACTTTAGCTGCTGCCTCCCTCTGATTCCCCAGCTCATCTCCCTGGTTGCATGGCCCACTTGGAGC 2400
2401 TGAGGTCTCATACAAGGATATTTGGAGTGAAATGCTGGCCAGTACTTGTTCTCCCTTGCCCCAACCCTTTACCGGATATC 2480
2481 TTGACAAACTCTCCAATTTTCTAAAATGATATGGAGCTCTGAAAGGCATGTCCATAAGGTCTGACAACAGCTTGCCAAAT 2560
2561 TTGGTTAGTCCTTGGATCAGAGCCTGTTGTGGGAGGTAGGGAGGAAATATGTAAAGAAAAACAGGAAGATACCTGCACTA 2640
2641 ATCATTCAGACTTCATTGAGCTCTGCAAACTTTGCCTGTTTGCTATTGGCTACCTTGATTTGAAATGCTTTGTGAAAAAA 2720
2721 GGCACTTTTAACATCATAGCCACAGAAATCAAGTGCCAGTCTATCTGGAATCCATGTTGTATTGCAGATAATGTTCTCAT 2800
2801 TTATTTTTGATGTAGAATTTACATTGCCATGGGTGTTAAATAAGCTTTGAGTCAAAAGTCAAGAAAGTGACTGAATATAC 2880
2881 AGTCACCTTTTATGAAATGAGTCTCTGTGTTACTGGGTGGCATGACTGATTGAGGTGAAGCTCACGGGGCCAGGCTGACC 2960

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2961  GTCTTGACCGTTCCACTTGAGATAGGTTGGTCATCGTGCAGAAGGCCCCAGGACCTCAGCACACACAGCCTCCTCTTGGT  3040
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3121  TGTCTGGAAGTTTATTCTTAAGAGACTGCTACCCAGCTGGTCTGTATTATTGGAAGTTGCAGTTCGTGCTTTGGTTGGCC  3200
3201  TTCTGGTCTAAAGCTGTGTCCTGAATATTAGGGATCACAATTCACTGAAATACAGCAGTGTGTGGAGGTGATGGCCAGTT  3280
3281  AATCTGCTGAACTGGTTTTGACTAATGACAAACCTCTTTTTAAGATGGTAGAATGGAGGTGATAGTCACAAAAGTAAATG  3360
3361  TTCCATTTTTATGAATGACTTTCTACAGAGTTTCTATTTCTAAAGAAAAAACAATTGTTCACATCCCATCTGATGATTAG  3440
3441  CATGTGTGTAATGAATGCTGTCTTGGTCTCCCCTGTGGAAACCCTTCTCCCTGTGCCTTAGAGCAGGTGTGTACATCTCT  3520
3521  CACTACCTTTCTCATGGGTGCTGTTAGATTTTGGCACCCGTTTTCTCAGCATTCAGCCCAGGGAATGTGGTTTTCACTTC  3600
3601  TTCGTCAGATAAGACCAACATGAAGGGGTATGTTGAGAAACATCCTGAGGCAAGGTGGGAGGTGGGATGGGGCAGGACTT  3680
3681  TCCCTTCCAAGCACATGCATGGCAGGTGGGGAAAGGGGGGCTTGCACCCCTGCTGGAAAGAAAAGGTTTGTGTATATTTC  3760
3761  TGATGCAAATGTCATACTCACTGCTCTGTAAAGGCAGCTGGCAGCTTTTTGGGAAAAGAACGTGCTCGTCTGTTCTCTGG  3840
3841  CATCAAGTTTCTTGCAGCTGCTCTGAGGGAGAGACAGTGAGCTGCAAGACTGCCTCCCCATAACAACAGGCAACTCAGAG  3920
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4081  TCTTATTGAGGCCAAGAGATGTTTCCTGTCCCAGAGGAACCATTAGGAGTCGCTTTTAGGGTATTCAGCTTTGTTCATGA  4160
4161  AATAAGGCATCTCTGAGAAAGTGGCCCCAGGGAGAGAATGGAGGACTGGGAGGAGAAGCATTAACTGAGCTCCAAGGGTG  4240
4241  TGTGGGCAGAGAGCTTGCTATGTGAACTCACTCCTTAAGAAAATGGAAGAGAAAAAGAGAGTGCTAGTTAAAAAATCGGG  4320
4321  ATGTTTTAGTTTGGATTTAGGGTTTTGATACTTATGTTGAAATACTAATGTTTCTGATCAATAAAATCAAACTCTTAATA  4400
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FIG.1A (Cont'd)

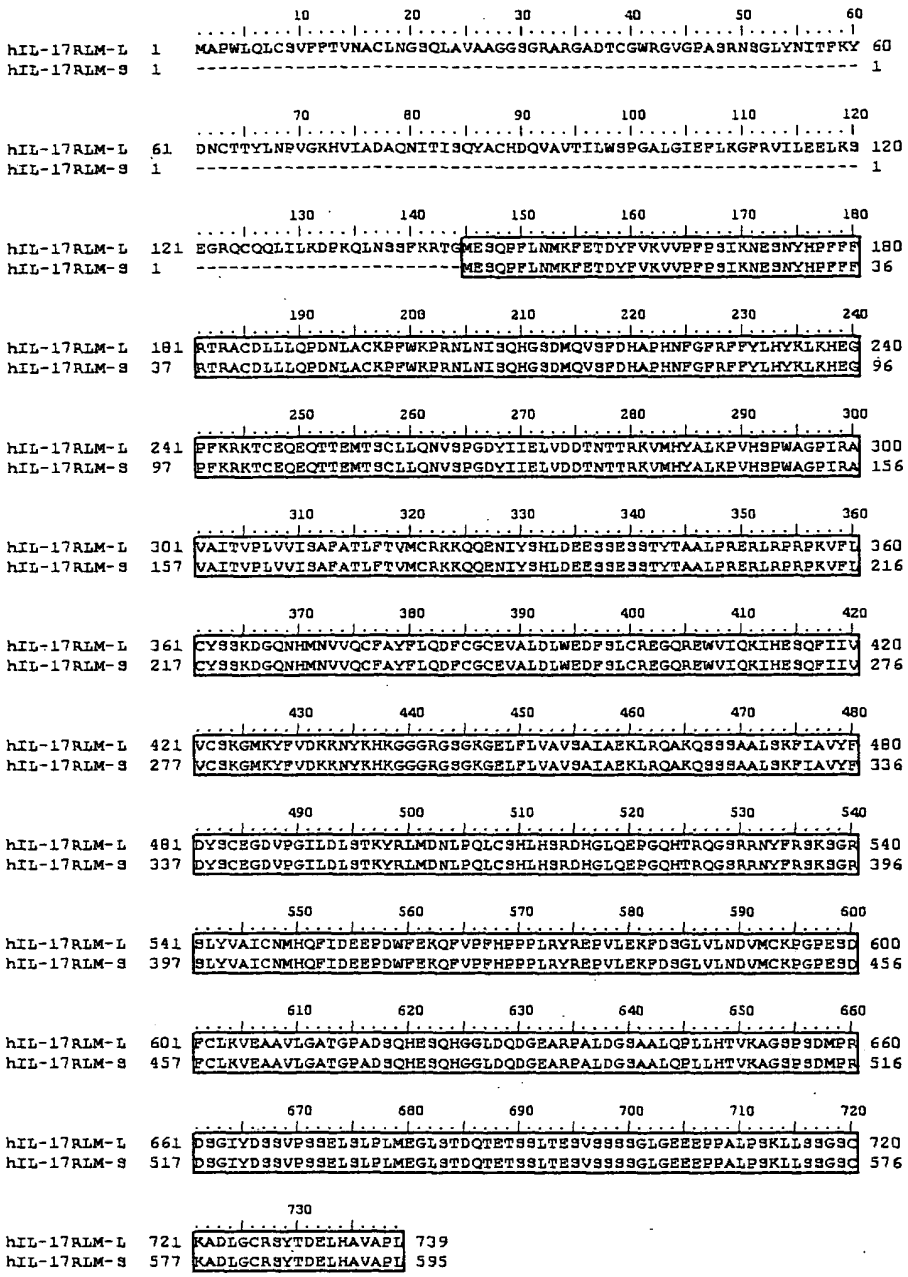

FIG. 1B

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IL-17AR      353 EKYSDDTKYTDGLPAADLIEFFLKPRKVWIIYSA-DHPLYVDVVLKFAQFLLTACGTEVA 411
                 E+ S+ + YT  LP   L F F    KV++ YS+ D   +++VV  FA FL   CG EVA
hIL-17RLM-L  335 EESSESSTYTAALPRERLRGRF----KVFLCYSSKDGQNHMNVVQCFAYFLQDFCGCEVA 390

IL-17AR      412 LQLIEEQAISEAGVMTWVGRQKQEMVESNSKIIVLCSRGTR----ARWQALLGRGAPVRL 467
                 LQL E+ ++   G   WV     + +  + IIV+CS+G +      K     G G
hIL-17RLM-L  391 LQLWEDFSLCREGQRFWV----IQKIHESQFIIVVCSKGMKYFVDKKNYKHKGGG----- 441

IL-17AR      468 RCDHGKPVGDLFTAAMNMLLPDFKR-----FACFGTYVVCYFSEVSCDGDVPDLFGAAPR 522
                      G  G+LF  A++ I    ++       A    ++  YF + SC+GDVF +   + +
hIL-17RLM-L  442 ---RGSGKGELFLVAVSAIAEKLRQAKQSSSAALSKFIAVYF-DYSCFGDVPGILDLSTK 497

IL-17AR      523 YPLMQRFEEV--YFRIQDLEMFQPGRMHRVGELSGDNYLRSPGGRQLRAALDRFRDWQVR 580
                 Y LMD   ++  +   +D  + +PG+  R G  S  NY RS  GR L  A+     +
hIL-17RLM-L  498 YRLMDNLPQLCSHLHSRDHGLQEPGQHTRQG--SRRNYFRSKSGRSLYVAICNMHQFIDE 555

IL-17AR      581 CPDWFE 586
                 PDWFE
hIL-17RLM-L  556 EPDWFE 561
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FIG. 1C

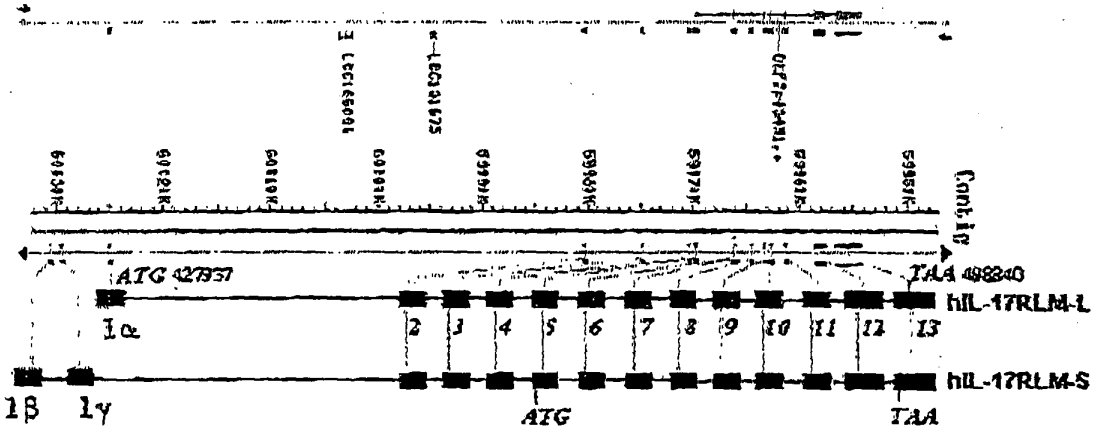

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Fig.1D

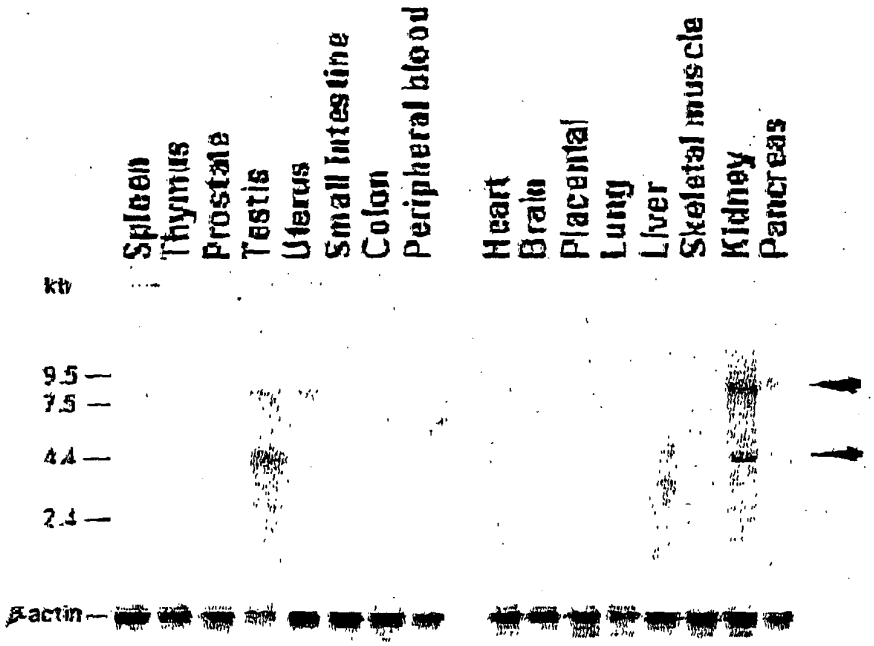

FIG. 2A

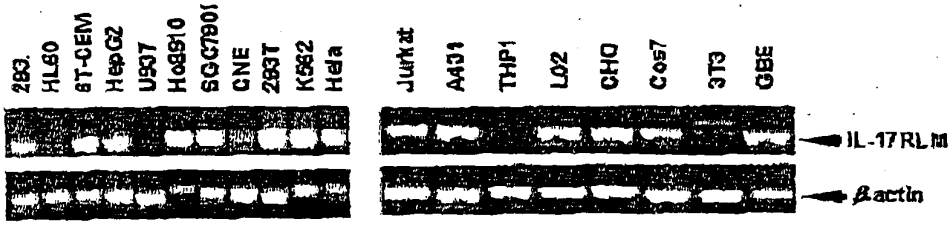

Fig. 2B

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FIG. 2C

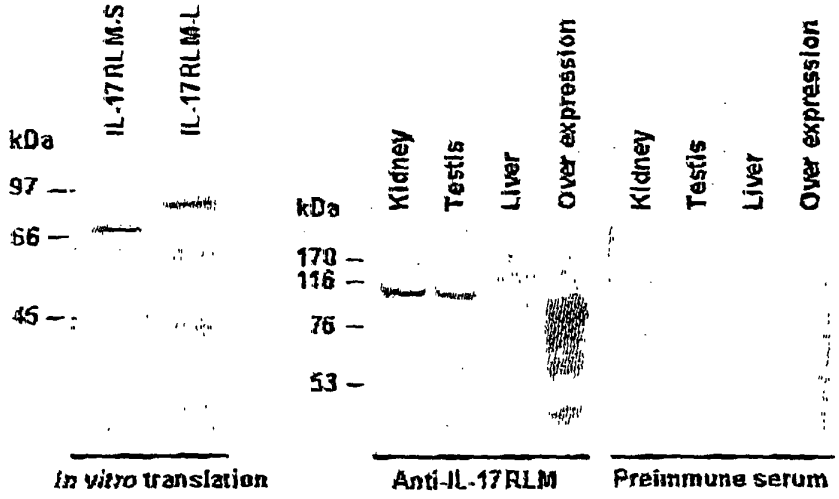

FIG. 2D

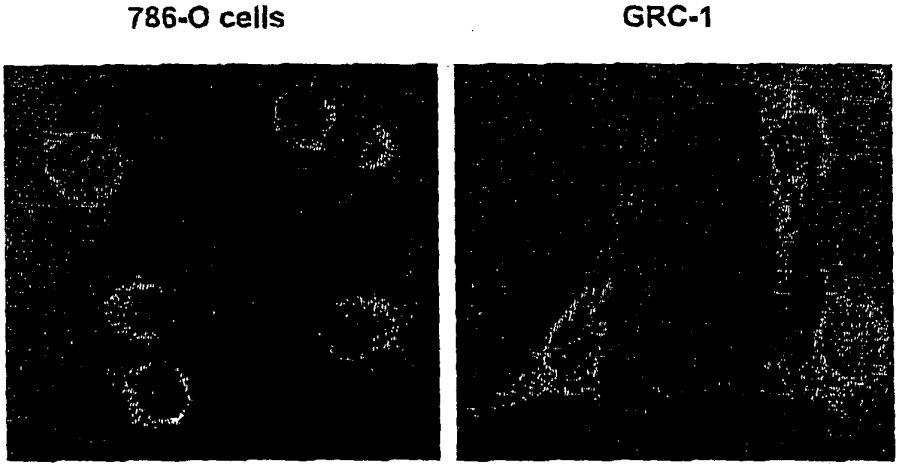

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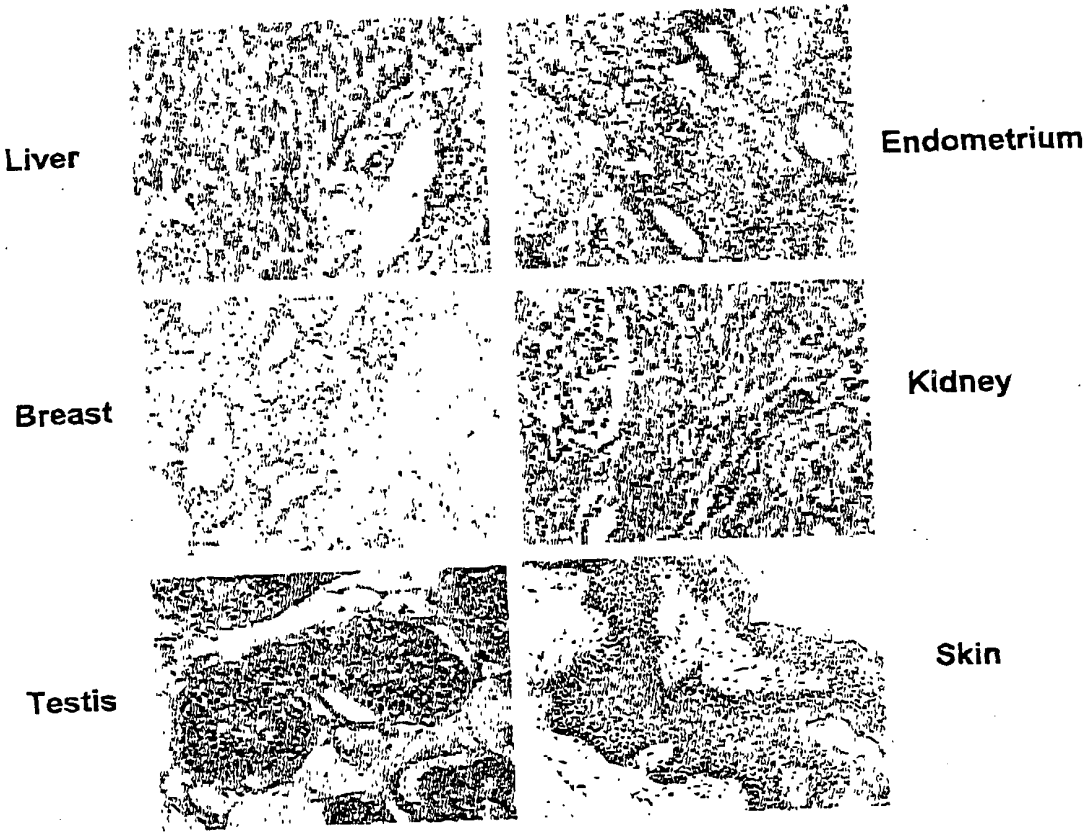
FIG. 2E



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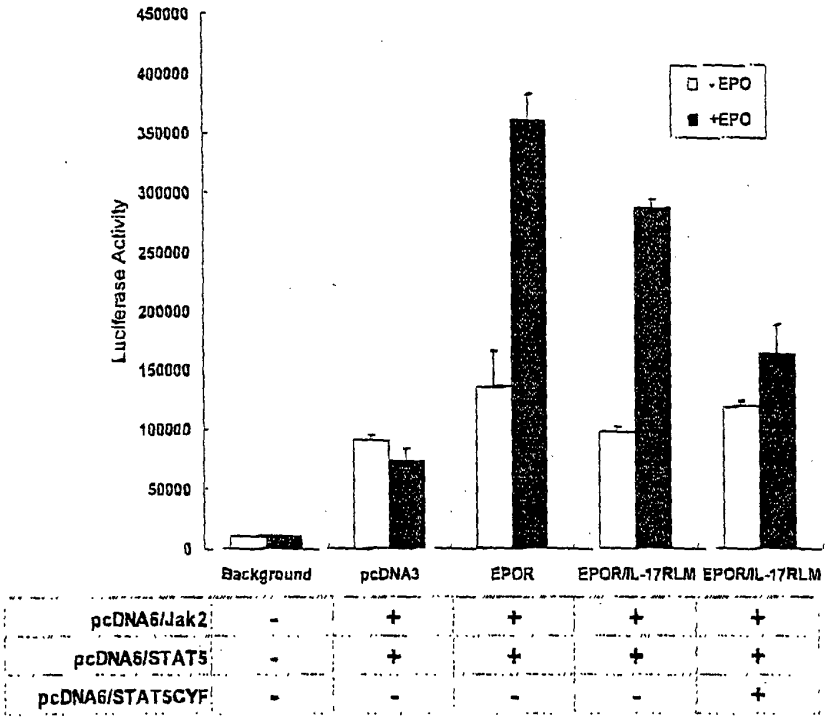

FIG. 3A

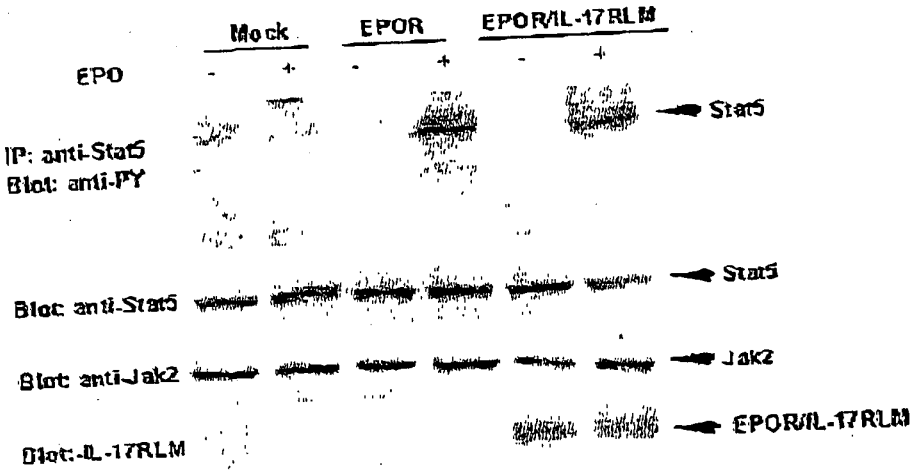

FIG. 3B

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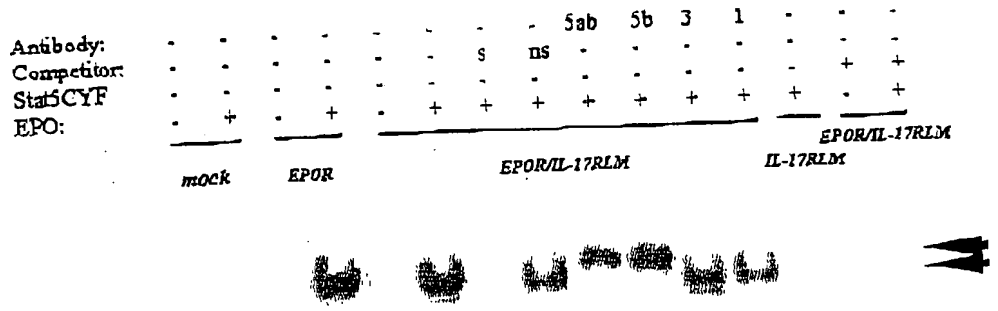

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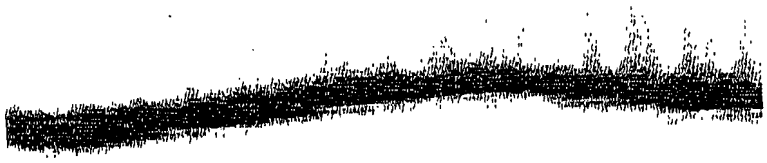

FIG. 3C

FIG. 3D

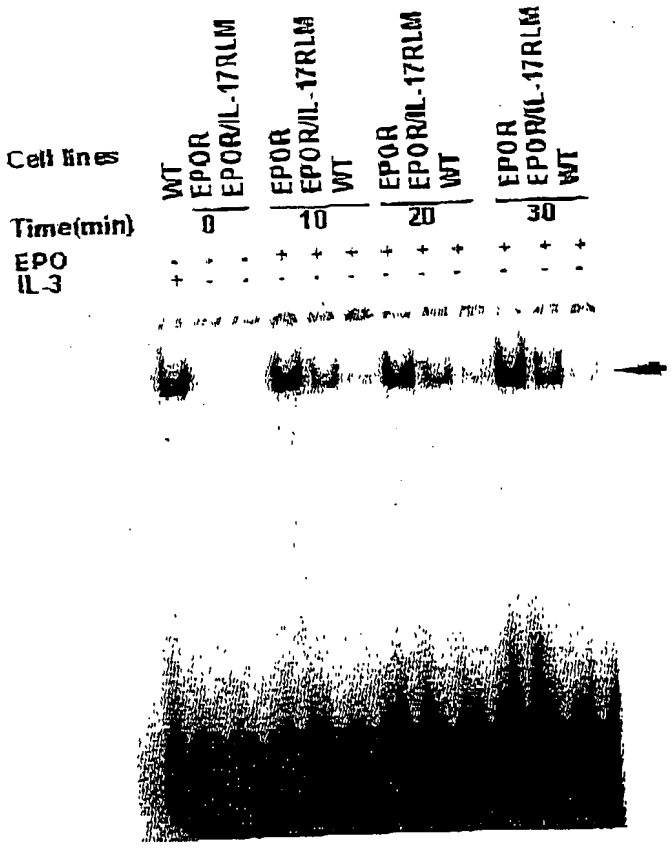

FIG. 3E

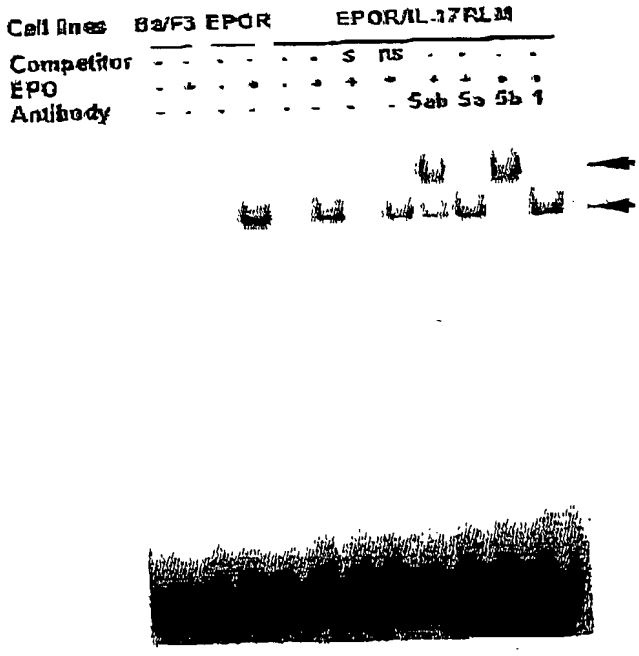

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FIG. 4A

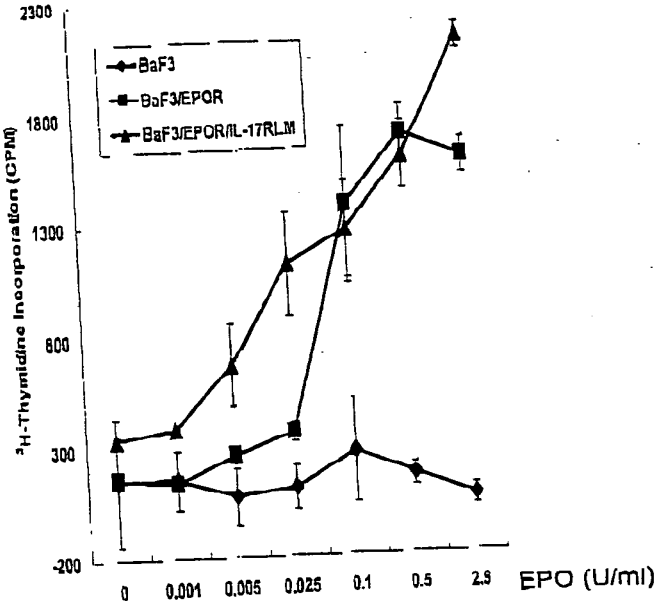

2300
1800
1300
800
300
-200
^{3}H-Thymidine Incorporation (CPM)
BaF3
BaF3/EPOR
BaF3/EPOR/IL-17RLM
0
0.001
0.005
0.025
0.1
0.5
2.5
EPO (U/ml)

FIG. 4B

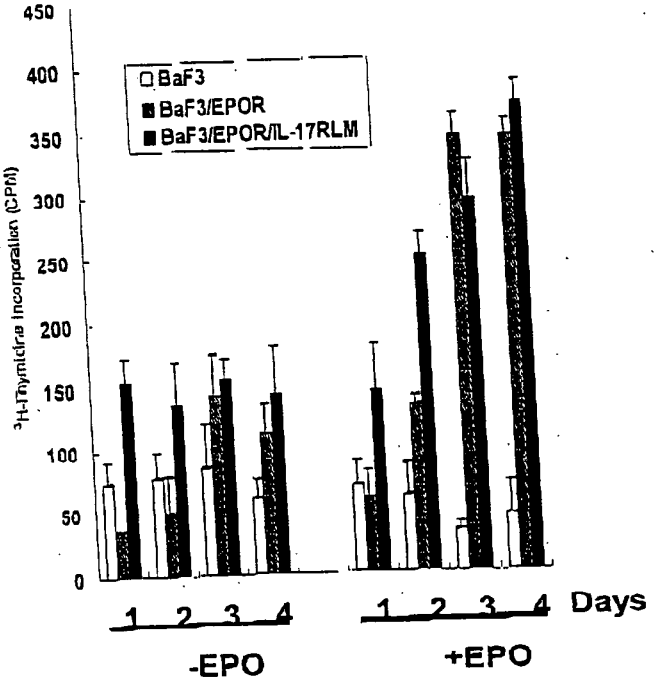

450
400
350
300
250
200
150
100
50
0
^{3}H-Thymidine Incorporation (CPM)
BaF3
BaF3/EPOR
BaF3/EPOR/IL-17RLM
1 2 3 4
1 2 3 4
Days
-EPO
+EPO

FIG.5A

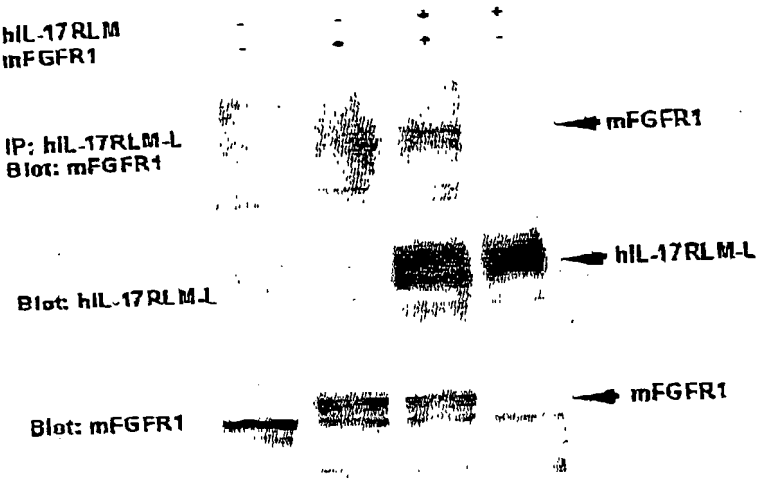
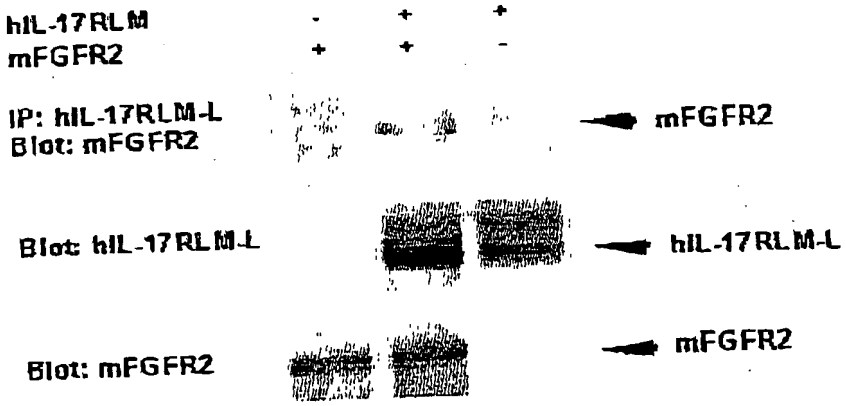


FIG. 5B



BEST AVAILABLE COPY

FIG. 5C

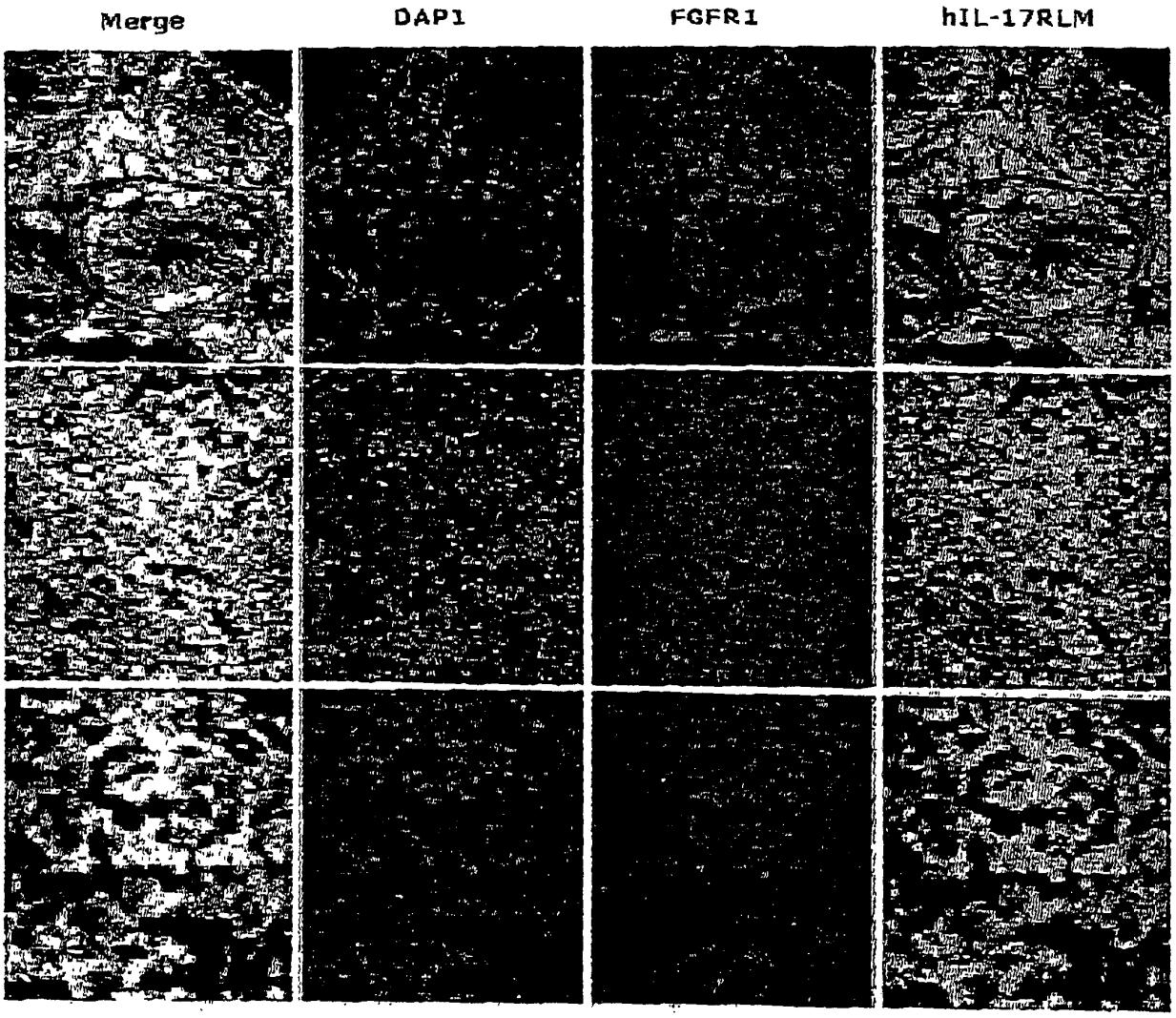


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FIG. 5D

BEST AVAILABLE COPY

FIG. 6A

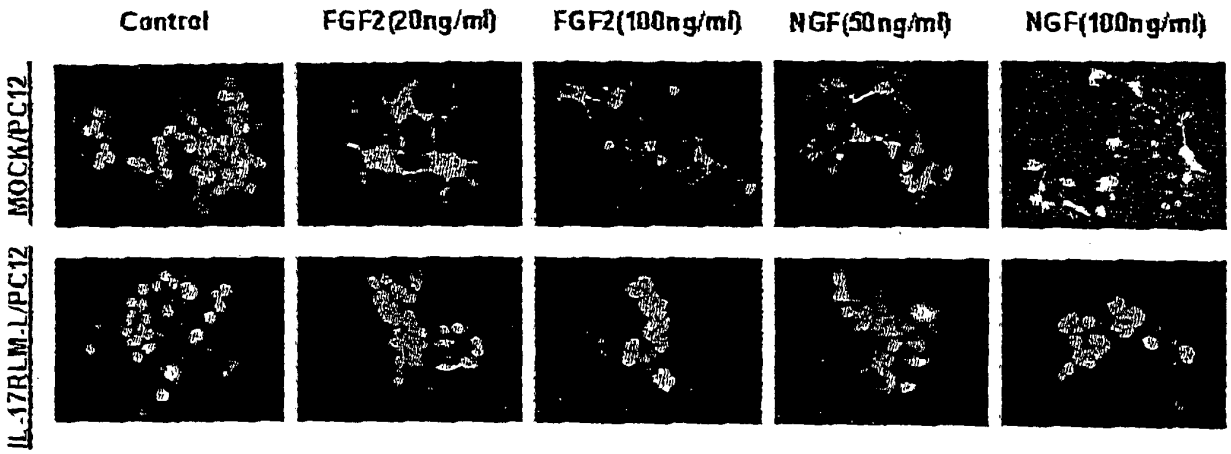

FIG. 6B

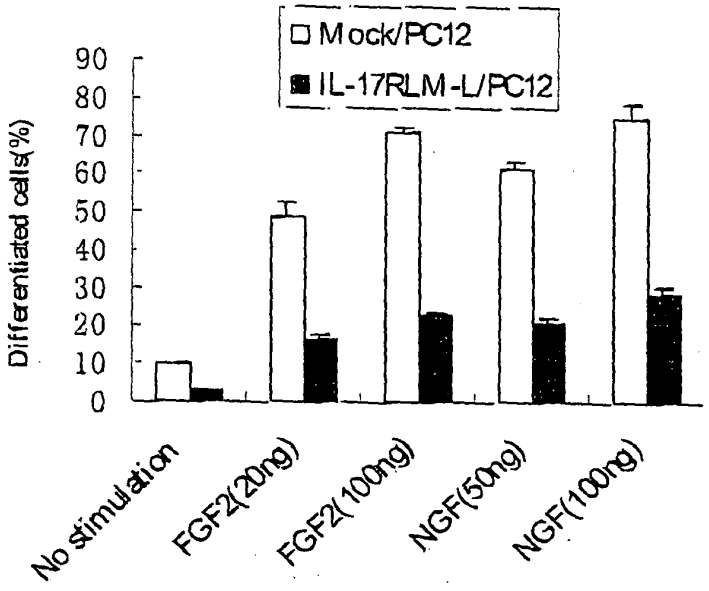

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FIG. 6C

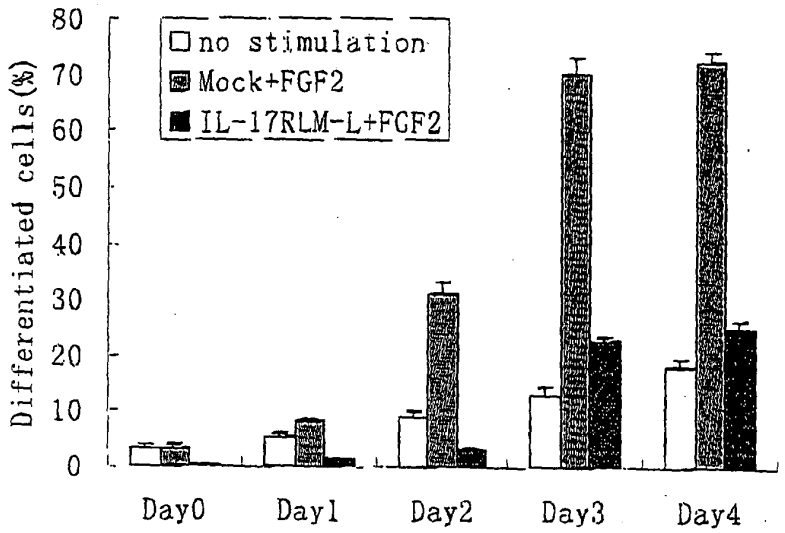
no stimulation
Mock+FGF2
IL-17RLM-L+FGF2
Differentiated cells(%)
80
70
60
50
40
30
20
10
0
Day0
Day1
Day2
Day3
Day4

FIG. 6D

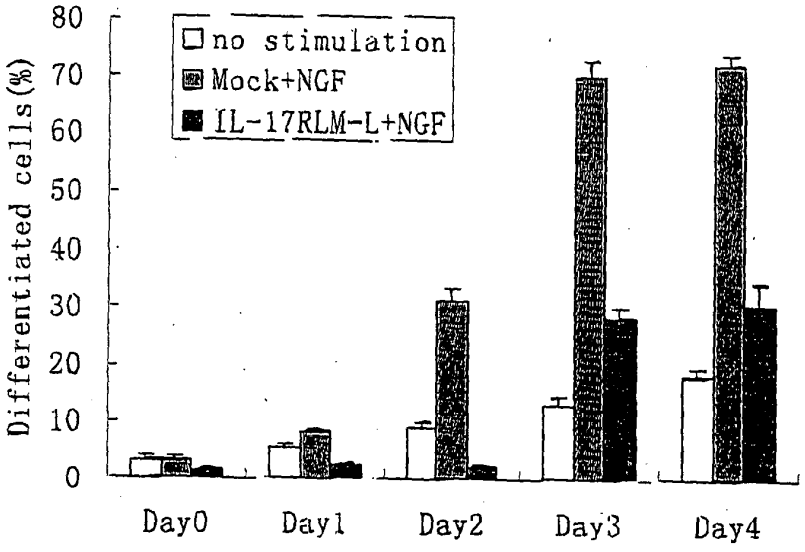
no stimulation
Mock+NGF
IL-17RLM-L+NGF
Differentiated cells(%)
80
70
60
50
40
30
20
10
0
Day0
Day1
Day2
Day3
Day4

FIG. 6E

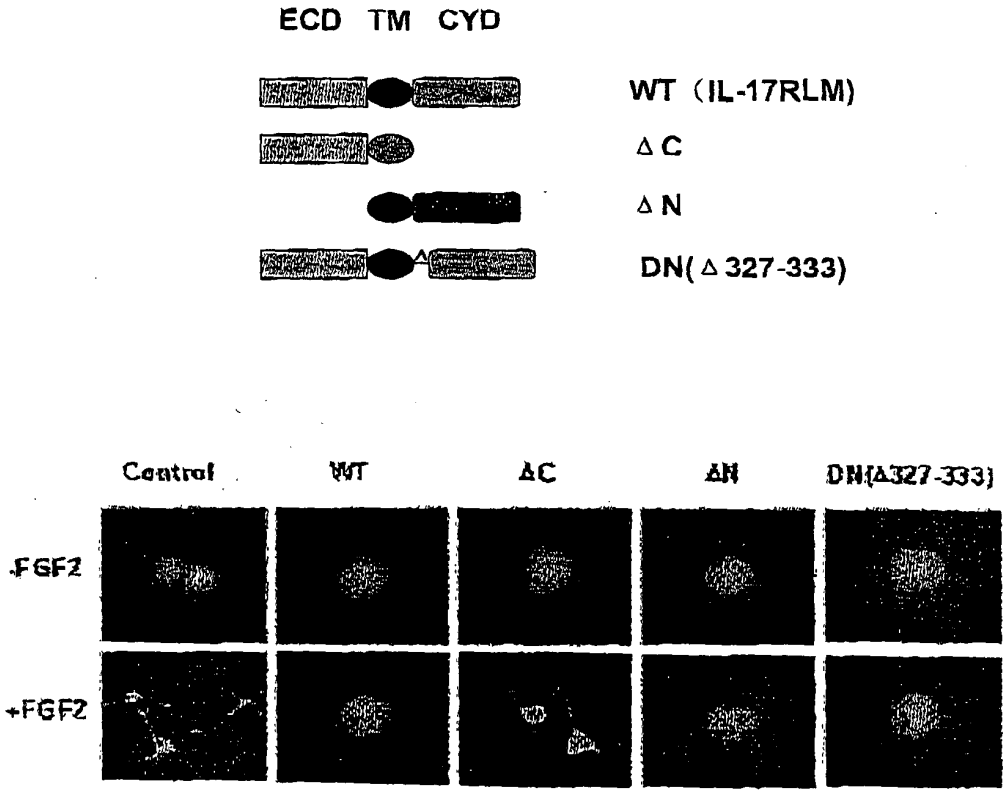

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FIG. 6F

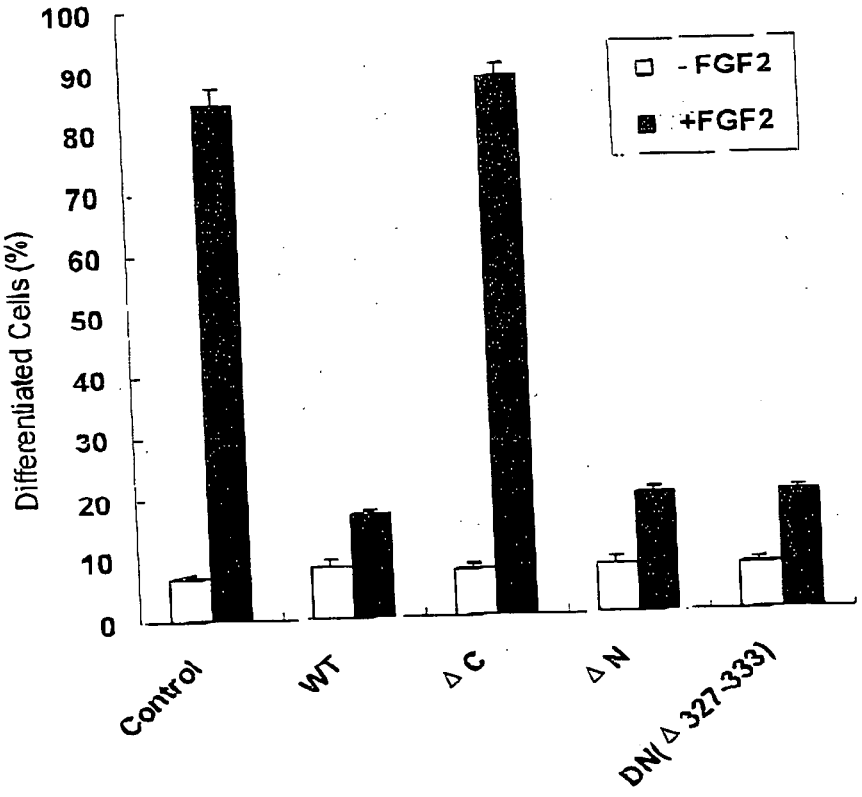
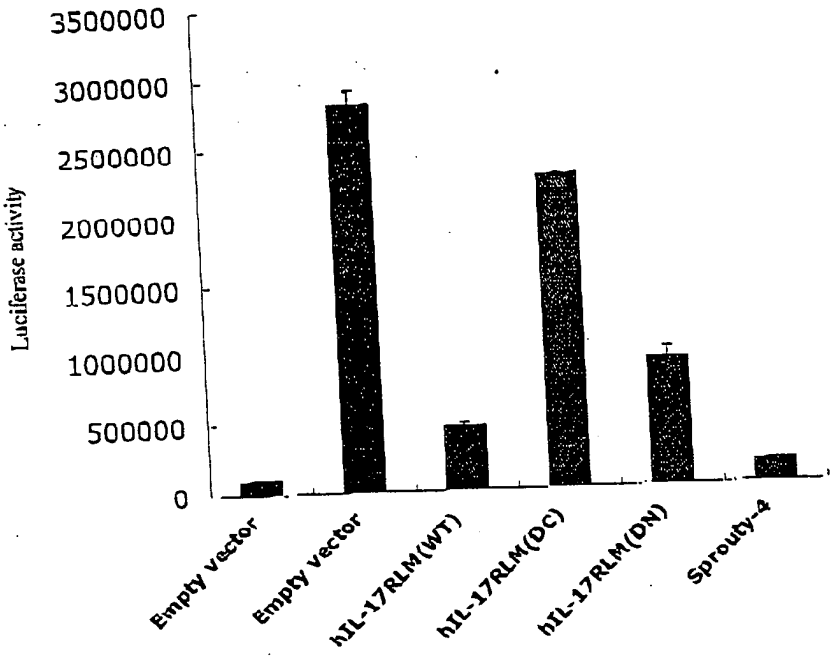

100
90
80
70
60
50
40
30
20
10
0
Differentiated Cells (%)
- FGF2
+FGF2
Control
WT
Δ C
Δ N
DN(Δ 327-333)

FIG. 7A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3000000
2500000
2000000
1500000
1000000
500000
0
Luciferase activity
Empty vector
Empty vector
hIL-17RLM(WT)
hIL-17RLM(DC)
hIL-17RLM(DN)
Sprouty-4
FGF2
-
+
+
+
+
+

FIG. 7B

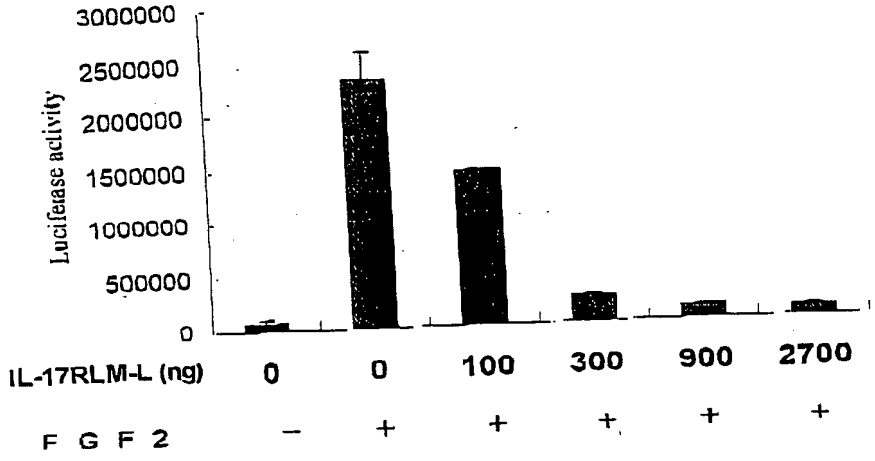

3000000
2500000
2000000
1500000
1000000
500000
0
Luciferase activity
IL-17RLM-L (ng) 0 0 100 300 900 2700
F G F 2 – + + + + +

FIG. 7C

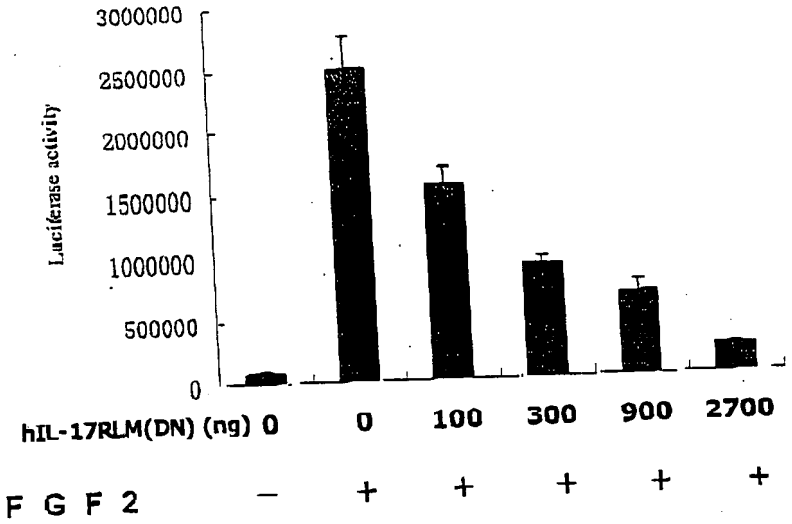

3000000
2500000
2000000
1500000
1000000
500000
0
Luciferase activity
hIL-17RLM(DN) (ng) 0 0 100 300 900 2700
F G F 2 – + + + + +

FIG. 7D

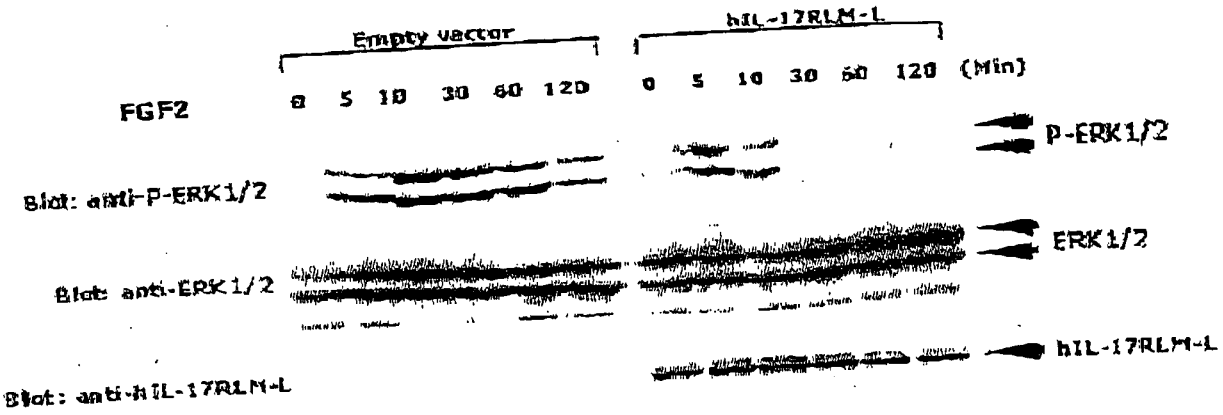
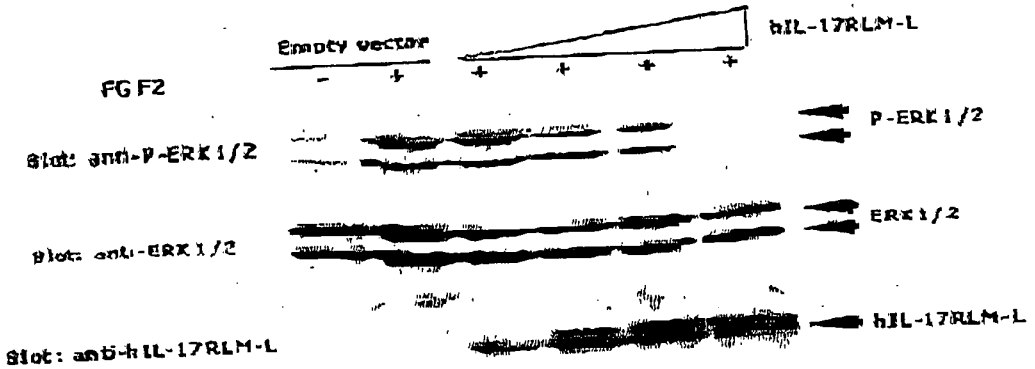


FIG. 7E



BEST AVAILABLE COPY

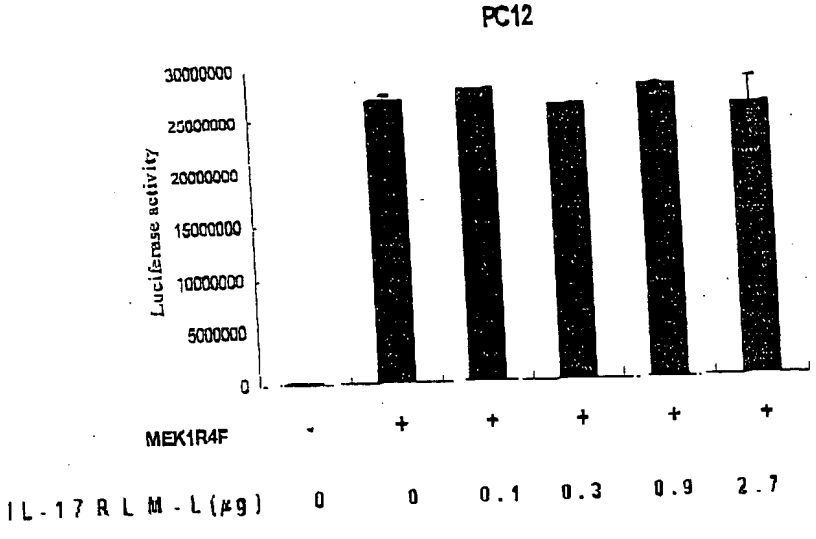


FIG. 8A

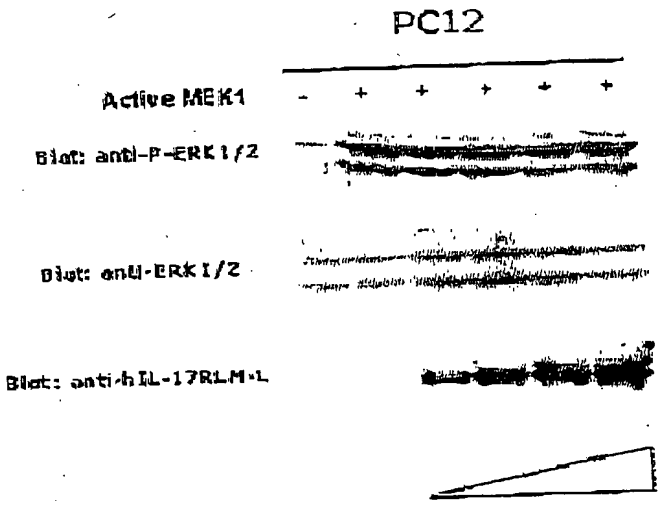


FIG. 8B

BEST AVAILABLE COPY

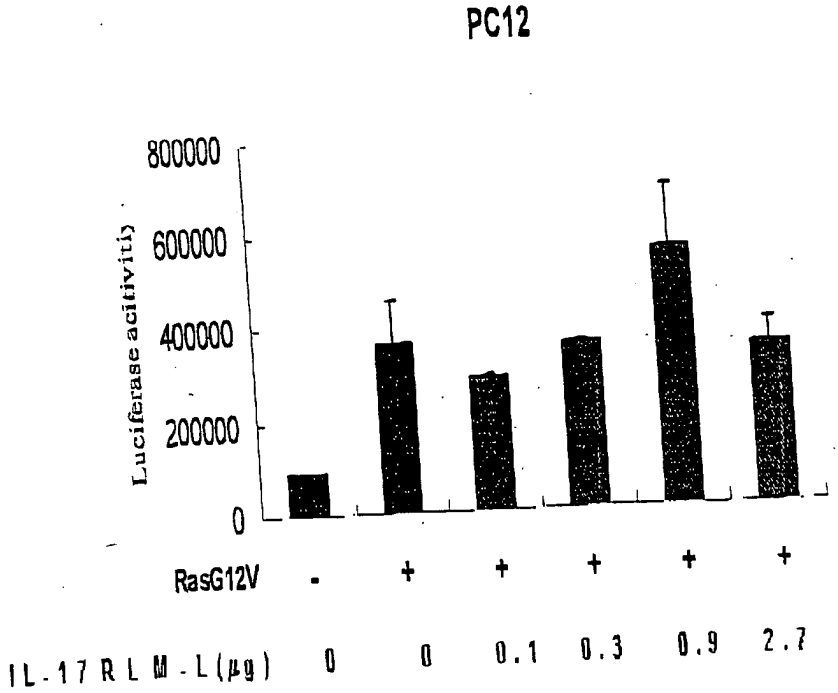


FIG. 8C

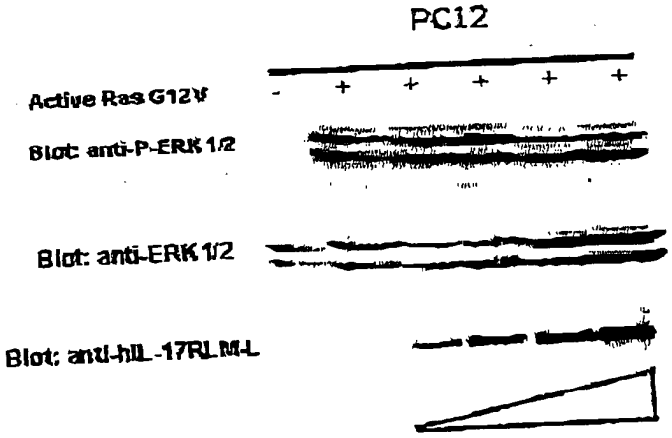


FIG. 8D

BEST AVAILABLE COPY

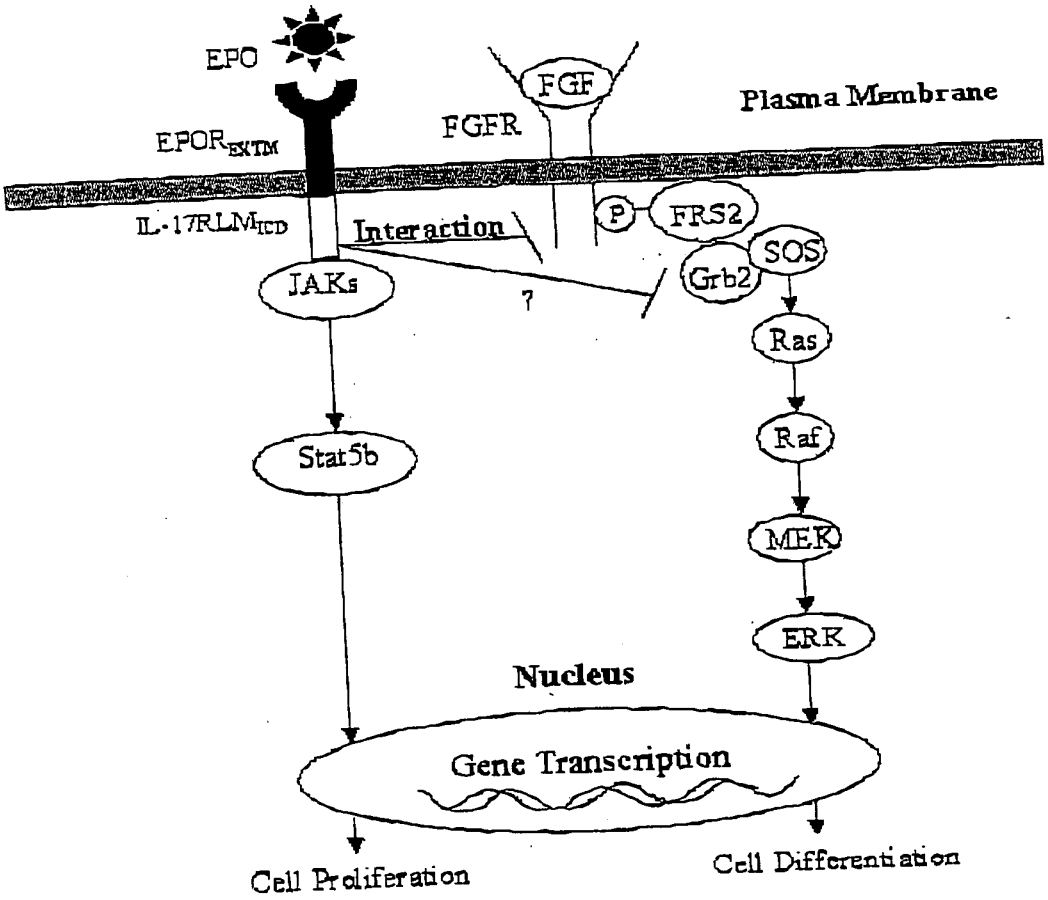

EPO
FGF
Plasma Membrane
FGFR
EPOR$_{EXTM}$
IL-17RLM$_{ICD}$
Interaction
P
FRS2
SOS
Grb2
JAKs
?
Ras
Stat5b
Raf
MEK
ERK
Nucleus
Gene Transcription
Cell Proliferation
Cell Differentiation

FIG. 9